



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2017-1026; Product Identifier 2017-NM-097-AD;

Amendment 39-19422; AD 2018-19-21]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for all The Boeing Company Model 707 airplanes, and Model 720 and 720B series airplanes. This AD was prompted by fuel system reviews conducted by the manufacturer. This AD requires revising the maintenance or inspection program to include new airworthiness limitations. We are issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone: 562-797-1717; Internet: <https://www.myboeingfleet.com>. You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It

is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-1026.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-1026; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the regulatory evaluation, any comments received, and other information. The address for Docket Operations (phone: 800-647-5527) is Docket Operations, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Samuel Lee, Aerospace Engineer, Propulsion Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5262; fax: 562-627-5210; email: samuel.lee@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all The Boeing Company Model 707 airplanes, and Model 720 and 720B series airplanes. The NPRM published in the Federal Register on November 20, 2017 (82 FR 55057). The NPRM was prompted by fuel system reviews conducted by the manufacturer. The NPRM proposed to require revising the maintenance or inspection program to include new airworthiness limitations.

We are issuing this AD to detect and correct potential ignition sources inside fuel tanks caused by latent failures, alterations, repairs, or maintenance actions, which, in

combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane.

Comments

We gave the public the opportunity to participate in developing this final rule. We have considered the comment received. Boeing supported the NPRM.

Clarification of Alternative Wire Types and Sleeving

Paragraph (h) of this AD allows alternative wire types and sleeving materials for certain wire types and sleeving materials identified in AWL No. 28-AWL-03. AWL No. 28-AWL-03 was originally mandated by AD 2008-04-11 R1, Amendment 39-16147 (74 FR 68505, December 28, 2009) (“AD 2008-04-11 R1”). Since the issuance of AD 2008-04-11 R1, which is terminated by this AD, we received numerous requests for approval of alternative methods of compliance (AMOCs) from operators and supplemental type certificate (STC) holders (or applicants) to allow the installation of the alternative wire types and sleeving. We evaluated certain attributes of those alternative wire types and sleeving for each installation, and issued numerous AMOC approvals for AD 2008-04-11 R1, based on our determination that the installation of those wire types and sleeving would provide an acceptable level of safety. The alternative wire types and sleeving specified in paragraph (h) of this AD were previously approved as an AMOC for AD 2008-04-11 R1. Although paragraph (h) of this AD provides certain allowances, it does not provide approval of alternative wire types and sleeving that are installed as part of an aircraft design change. Each applicant for any design change is responsible to show that the installation of alternative wire types and sleeving identified in paragraphs (h)(1) and (h)(2) of this AD complies with all applicable regulatory requirements. This responsibility includes, but is not limited to, substantiation of compliance with flammability requirements, and substantiation to show that sleeve installation, including

the selection of sleeve thickness, is adequate to protect wires from chafing for the life of installation.

Conclusion

We reviewed the relevant data, considered the comment received, and determined that air safety and the public interest require adopting this final rule as proposed, except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

Related Service Information under 1 CFR part 51

We reviewed Boeing 707/720 Airworthiness Limitations (AWLs), D6-7552-AWL, dated October 2016, which addresses fuel systems ignition prevention and impact-resistant fuel tank access doors. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

We estimate that this AD affects 9 airplanes of U.S. registry. We estimate the following costs to comply with this AD:

We have determined that revising the maintenance or inspection program takes an average of 90 work-hours per operator, although we recognize that this number may vary from operator to operator. In the past, we have estimated that this action takes 1 work-hour per airplane. Since operators incorporate maintenance or inspection program changes for their affected fleet(s), we have determined that a per-operator estimate is more accurate than a per-airplane estimate. Therefore, we estimate the total cost per operator to be \$7,650 (90 work-hours x \$85 per work-hour).

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes and associated appliances to the Director of the System Oversight Division.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,

(2) Is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),

(3) Will not affect intrastate aviation in Alaska, and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2018-19-21 The Boeing Company: Amendment 39-19422; Docket No. FAA-2017-1026; Product Identifier 2017-NM-097-AD.

(a) Effective Date

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD affects the ADs specified in paragraphs (b)(1) and (b)(2) of this AD.

(1) AD 2008-04-11 R1, Amendment 39-16147 (74 FR 68505, December 28, 2009) (“AD 2008-04-11 R1”).

(2) AD 2013-24-07, Amendment 39-17681 (78 FR 72550, December 3, 2013)
("AD 2013-24-07").

(c) Applicability

This AD applies to all The Boeing Company airplanes, certificated in any category, identified in paragraphs (c)(1) and (c)(2) of this AD.

(1) Model 707-100 long body, -200, -100B long body, -100B short body, -300, -300B, -300C, and -400 series airplanes.

(2) Model 720 and 720B series airplanes.

(d) Subject

Air Transport Association (ATA) of America Code 28, Fuel.

(e) Unsafe Condition

This AD was prompted by fuel system reviews conducted by the manufacturer. We are issuing this AD to detect and correct potential ignition sources inside fuel tanks caused by latent failures, alterations, repairs, or maintenance actions, which, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Revision of Maintenance or Inspection Program

Within 60 days after the effective date of this AD, revise the maintenance or inspection program, as applicable, to incorporate the information in Section A, including Subsections A.1, A.2, and Appendix A, as specified in Boeing 707/720 Airworthiness Limitations (AWLs), D6-7552-AWL, dated October 2016; except as provided in paragraph (h) of this AD. The initial compliance times for the AWL tasks are within the applicable compliance times specified in paragraphs (g)(1) through (g)(5) of this AD.

(1) AWL No. 28-AWL-01, External Wires Over Center Fuel Tank, as specified in Boeing 707/720 Airworthiness Limitations (AWLs), D6-7552-AWL, dated October 2016. The initial compliance time for accomplishment of the actions specified by AWL No. 28-AWL-01 is specified in paragraph (g)(1)(i) or (g)(1)(ii) of this AD, as applicable.

(i) For airplanes that have been previously inspected as specified in 28-AWL-01 as of the effective date of this AD: Conduct the inspection within 120 months after the most recent inspection.

(ii) For airplanes that have not been inspected as specified in 28-AWL-01 as of the effective date of this AD: Conduct the inspection within 12 months after the effective date of this AD.

(2) AWL No. 28-AWL-18, AC Fuel Boost Pump Bonding Installation, as specified in Boeing 707/720 Airworthiness Limitations (AWLs), D6-7552-AWL, dated October 2016. The initial compliance time for accomplishment of the actions specified by AWL No. 28-AWL-18 is specified in paragraph (g)(2)(i) or (g)(2)(ii) of this AD, as applicable.

(i) For airplanes that have been previously inspected as specified in 28-AWL-18 as of the effective date of this AD: Conduct the inspection within 72 months after the most recent inspection.

(ii) For airplanes that have not been inspected as specified in 28-AWL-18 as of the effective date of this AD: Conduct the inspection within 12 months after the effective date of this AD.

(3) AWL No. 28-AWL-19, Fuel Valve Bonding Jumper Installation – Engine Fuel Shutoff, Defuel, Reserve Tank Transfer, Fuel Dump, and Fuel Manifold Valves, as specified in Boeing 707/720 Airworthiness Limitations (AWLs), D6-7552-AWL, dated October 2016. The initial compliance time for accomplishment of the actions specified by

AWL No. 28-AWL-19 is specified in paragraph (g)(3)(i) or (g)(3)(ii) of this AD, as applicable.

(i) For airplanes that have been previously inspected as specified in 28-AWL-19 as of the effective date of this AD: Conduct the inspection within 72 months after the most recent inspection.

(ii) For airplanes that have not been inspected as specified in 28-AWL-19 as of the effective date of this AD: Conduct the inspection within 12 months after the effective date of this AD.

(4) AWL No. 28-AWL-21, Dry Bay Fuel Manifold Assembly – Bonding Jumper Installation, as specified in Boeing 707/720 Airworthiness Limitations (AWLs), D6-7552-AWL, dated October 2016. The initial compliance time for accomplishment of the actions specified by AWL No. 28-AWL-21 is specified in paragraph (g)(4)(i) or (g)(4)(ii) of this AD, as applicable.

(i) For airplanes that have been previously inspected as specified in 28-AWL-21 as of the effective date of this AD: Conduct the inspection within 72 months after the most recent inspection.

(ii) For airplanes that have not been inspected as specified in 28-AWL-21 as of the effective date of this AD: Conduct the inspection within 12 months after the effective date of this AD.

(5) AWL No. 28-AWL-23, Reserve Tank Transfer Piping Assembly – Bonding Jumper Installation, as specified in Boeing 707/720 Airworthiness Limitations (AWLs), D6-7552-AWL, dated October 2016. The initial compliance time for accomplishment of the actions specified by AWL No. 28-AWL-23 is specified in paragraph (g)(5)(i) or (g)(5)(ii) of this AD, as applicable.

(i) For airplanes that have been previously inspected as specified in 28-AWL-23 as of the effective date of this AD: Conduct the inspection within 72 months after the most recent inspection.

(ii) For airplanes that have not been inspected as specified in 28-AWL-23 as of the effective date of this AD: Conduct the inspection within 12 months after the effective date of this AD.

(h) Additional Acceptable Wire Types and Sleeving

As an option, when accomplishing the actions required by paragraph (g) of this AD, the changes specified in paragraphs (h)(1) and (h)(2) of this AD are acceptable.

(1) Where AWL No. 28-AWL-03 identifies wire types BMS 13-48, BMS 13-58, and BMS 13-60, the following wire types are acceptable: MIL-W-22759/16, SAE AS22759/16 (M22759/16), MIL-W-22759/32, SAE AS22759/32 (M22759/32), MIL-W-22759/34, SAE AS22759/34 (M22759/34), MIL-W-22759/41, SAE AS22759/41 (M22759/41), MIL-W-22759/86, SAE AS22759/86 (M22759/86), MIL-W-22759/87, SAE AS22759/87 (M22759/87), MIL-W-22759/92 and SAE AS22759/92 (M22759/92); and MIL-C-27500 and NEMA WC 27500 cables constructed from these military or SAE specification wire types identified above.

(2) Where AWL No. 28-AWL-03 identifies TFE-2X Standard wall for wire sleeving, the following sleeving materials are acceptable: Roundit 2000NX and Varglas Type HO, HP, or HM.

(i) No Alternative Actions and Intervals

Except as provided in paragraph (h) of this AD, after the maintenance or inspection program has been revised as required by paragraph (g) of this AD, no alternative actions (e.g., inspections) or intervals may be used unless the actions or intervals are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (k) of this AD.

(j) Terminating Action for Other ADs

(1) Accomplishment of the actions required by paragraph (g) of this AD terminates all requirements of AD 2008-04-11 R1.

(2) Accomplishment of the actions required by paragraph (g) of this AD terminates the requirements of paragraph (h) of AD 2013-24-07.

(k) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Los Angeles ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (l) of this AD. Information may be emailed to: 9-AWP-LAACO-ADS@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Los Angeles ACO Branch, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(l) Related Information

For more information about this AD, contact Samuel Lee, Aerospace Engineer, Propulsion Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard,

Lakewood, CA 90712-4137; phone: 562-627-5262; fax: 562-627-5210; email: samuel.lee@faa.gov.

(m) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing 707/720 Airworthiness Limitations (AWLs), D6-7552-AWL, dated October 2016. (Subsection A.2 of this document includes pages 33 and 34, which are not identified in the Table of Contents.)

(ii) Reserved.

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone: 562-797-1717; Internet: <https://www.myboeingfleet.com>.

(4) You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:
<http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Des Moines, Washington, on September 10, 2018.

Michael Kaszycki,
Acting Director,
System Oversight Division,
Aircraft Certification Service.
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